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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/006,542	02/10/2003	6261834		8323

23389 7590 04/15/2003

SCULLY SCOTT MURPHY & PRESSER, PC
400 GARDEN CITY PLAZA
GARDEN CITY, NY 11530

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 04/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Order Granting / Denying Request For Ex Parte Reexamination	Control No. 90/006,542	Patent Under Reexamination 6261834	
	Examiner Sean R McGarry	Art Unit 1635	

OIPE AUG 30 2004 TRADEMARK

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The request for *ex parte* reexamination filed *10 February 2003* has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a)☐ PTO-892, b)☒ PTO-1449, c)☐ Other: _____

1. ☐ The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

2. ☒ The request for *ex parte* reexamination is DENIED.

This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). **EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.**

In due course, a refund under 37 CFR 1.26 (c) will be made to requester:

a) ☐ by Treasury check or,

b) ☐ by credit to Deposit Account No. _____, or

c) ☐ by credit to a credit card account, unless otherwise notified (35 U.S.C. 303(c)).

cc:Requester (if third party requester)

Reexamination

No substantial new question of patentability is raised by the request for reexamination and prior art cited therein for the reasons set forth below.

The requester indicates that claims 1-15 may be unpatentable over Chaterjee et al [US 5,474,935] In view of Izban et al [J. Biol. Chem. 264:9171,1989] which was cited during prosecution of the patent for which reexamination is requested.

The claims of 6,261,834, for which reexamination is requested, require an AAV vector that comprises two inverted repeats of AAV-2 and at least one cassette comprising a promoter capable of cell specific expression operably linked to a heterologous gene where the cassette lies between the inverted repeats.

Requestor has asserted that the '935 patent discloses an AAV vector that appears to be free of all AAV protein coding sequences and endogenous AAV promoters and contain cis-active DNA sequences for AAV DNA replication, encapsidation and host cell-specific expression. That is, it discloses an AAV vector that comprises two AAV-2 inverted repeats between which is included an expression cassette operably linked to a heterologous gene. Requestor asserts that Izban et al., cited in the prosecution of the '834 patent, discloses a known cell specific promoter.

The Chaterjee patent does not raise new substantial issues of patentability as to the '834 claims since the Chaterjee invention is clearly drawn to AAV based vectors with strong constitutive promoters (see column 9 last paragraph – column 10 line 14, for example). The invention is clearly drawn to the use of strong constitutive promoters in

order to allow for highly efficient expression in target cells. All promoters disclosed in the patent are strong constitutive promoters. There is simply no motivation provided in the art newly cited or the art of record to use other than a strong constitutive promoter.

The difference between the newly cited Chaterjee et al patent and the Lebkowski et al reference [Mol. Cell Biol. 8: 3988, 1988] , which was cited in combination with Izban et al in the prosecution of the '834 patent, lies in the disclosure of an AAV vector that appears to be free of all AAV protein coding sequences and endogenous AAV promoters and contain cis-active DNA sequences for AAV DNA replication, encapsidation and host cell-specific expression by Chaterjee et al., and where Lebkowski et al did not make an AAV vector that deleted all AAV protein coding sequences and promoters between the inverted repeats, but, made an assertion that such a vector could be made. However, the Board in their decision to reverse the Lebkowski et al. Izban et al. 103 rejection of record addressed this difference. The Board asserted that, even if the Board agreed that the assertion of Lebkowski et al. expressly suggested deleting the entire sequence between the ITRs, the prior art would not have suggested to those of ordinary skill in the art to insert a promoter other than p40. Further it was asserted by the Board "given that Izban does not suggest inserting its promoter in an AAV expression vector, the only reason for doing so is provided by appellants disclosure" (see pages 11 and 12 of the Board Decision, paper No.32 of 6,261,834). Chaterjee et al., nor Izban et al. suggest using a cell specific promoter. The newly cited reference, in view of the above, is considered cumulative to the teachings of the art cited in the earlier concluded examination of the patent.

The references set forth in the request , as drawn to sections I, II, and III, of the request for reexamination, have been considered both alone and in combination. They fail to raise a substantial new question of patentability as to any of the claims of 6,261,834. Accordingly, the request for reexamination is DENIED.

It is noted that an issue not within the scope of reexamination proceedings has been raised. In section IV of the request for reexamination the pertinancy of Liu et al. [Virology 182:361-364, 1991] and other references sited within section IV are discussed. The discussion is drawn solely to the enablement of the '834 claims. In MPEP 2217 it is stated:

> Substantial new questions of patentability must be based on patents or printed publications. Other matters, such as public use or sale, inventorship, 35 U.S.C. 101, 35 U.S.C. 112, fraud, etc., will not be considered when making the determination on the request and should not be presented in the request. Further, a prior art patent or printed publication cannot be properly applied as a ground for reexamination if it is merely used as evidence of alleged prior public use or sale, insufficiency of disclosure, etc. The prior art patent or printed publication must be applied directly to claims under 35 U.S.C. 103 and/or an appropriate portion of 35 U.S.C. 102 or relate to the application of other prior art patents or printed publications to claims on such grounds.

The issue will not be considered in a reexamination proceeding. 37 CFR 1.552(c). While this issue is not within the scope of reexamination, the patentee is advised that it may be desirable to consider filing a reissue application provided that the

patentee believes one or more claims to be partially or wholly inoperative or invalid based upon the issue.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean R McGarry whose telephone number is (703)305-7028. The examiner can normally be reached on M-Th (6:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John LeGuyader can be reached on (703) 308-0447. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

srm
April 15, 2003

SEAN McGARRY
PRIMARY EXAMINER
1635

INFORMATION DISCLOSURE CITATION
(PTO-1449)

ATTY. DOCKET NO.	PATENT NO. 6,261,834B1
44141-034	Reexamination Control No. 90/006,542
APPLICANT: Nicolson et al	
Issue DATE July 17, 2001	GROUP 1635

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
U.S. PATENT DOCUMENTS						
M	5,474,935	12/12/95	Chatterjee, et al.			

	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation?
FOREIGN PATENT DOCUMENTS						

	OTHER INFORMATION
M	Izban, et al., "Cell-specific Expression of Mouse Albumin Promoter", J.Biol. Chem, 264(16; 9171 (1989);
M	Liu et al., "Indiscriminate Activity from the B19 Parvovirus P6 Promoter in Nonpermissive Cells", Virology 182: 361-364 (1991);
M	Lebkowski et al., "Adeno-Associated Virus: a Vector System for Efficient Introduction and Integration of DNA into a Variety of Mammalian Cell Types", Mol. Cell. Biol. 8:3988 (1988)
M	Beaton et al., "Expression from the Adeno-Associated Virus p5 and p19 Promoters Is Negatively Regulated in *trans* by the *rep* Protein", J. Virol. 63: 4450-4454 (1989);
M	McLaughlin et al., "Adeno-Associated Virus General Transduction Vectors: Analysis of Proviral Structures", J. Virol. 62(5): 1963-1972 (1988);
M	Soriano et al., "Promoter Interactions in Retrovirus Vectors Introducted into Fibroblasts and Embryonic Stem Cells", J. Virol. 65: 2314 (1991);
M	Ponnazhagan et al., "Transcriptional Transactivation of Parvovirus B19 Prompters in Nonpermissive Human Cells by Adenovirus Type 2:, Journal of Virology, 69: 8096-8101 (1995);

EXAMINER SIGNATURE	DATE CONSIDERED
	4/15/03

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INFORMATION DISCLOSURE CITATION (PTO-1449)	ATTY. DOCKET NO. 44141-034	PATENT NO. 6,261,834B1 Reexamination Control No. 90/006,542
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EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE

EXAMINER'S INITIALS	
M	Ponnazhagan et al., "Differential expression in human cells from the p6 promoter of human parvovirus B19 following plasmid transfection and recombinant adeno-associated virus 2 (AAV) infection: human egakaryocytic leukaemia cells are non-permissive for AAV infection", J. General Virology 77: 1111-1122 (1996);
M	Wang et al., "Parvovirus B19 promoter at map unit 6 confers autonomous replication competence and erythroid specificity to adeno-associated virus 2 in primary human hematopoietic progenitor cells", Proc. Natl. Acad. Sci. '92: 12416 (1995).
M	Kurpad et al., "Adeno-Associated Virus 2-Mediated Transduction and Erythoid Lineage-Restricted Expression from Parvovirus B19 p. 6 Promoter in Primary Human Hematopoietic Progenitor Cells," J. Haematotherapy & Stem Cell Res. 8: 585 (1999);
M	Gareus et al., "Characterization of cis-Acting and NSI Proten-Responsive Elements in the p6 Promoter of Parvovirus B19", Journal of Virology 72: 609-616 (1998);
M	Ponnazhagan et al., "Lack of Site-Specif Integration of the Recombinant Adeno-Associated Virus 2 Genomes in Human Cells", Human Gene Therapy 8: 275-284 (1997);
M	Rutledge et al., "Adeno-Associated Virus Vector Integration Junctions", J. Virology 71: 8429-8436 (1997);
M	Omori et al., "Nontargeted Stable INtegration of Recombinant adeno-Associated Virus into Human Leukemia and Lymphoma Cell Lines as Evaluated by Fluorescence *in Situ* Hybridization", Human Gene Therapy 10: 537-543 (1999);
M	Miller et al., "Chromosomal effects of adeno-associated virus vector integration", Nature Genetics 30: 147-148 (2002);
M	Kearns et al., "Recombinant adeno-associated virus (AAV-CFTR) vectors do not integrate in a site-specific fashion in an immortalized epithelial cell line," Gene Therapy 3:748-755 (1996);
M	Miao et al., "Nonrandom Transduction of Recombinant Adeno-Associated Virus Vectors in Mouse Hepatocytes in Vivo: Cell Cycling Does Not Influence Hepatocyte Transduction", Journal of Virology 3793-3803 (2000)
M	Tan et al., "Adeno-asosciated Virus 2-Mediated Transduction and Erythroid Lineage-Restricted Long-Term Expression of the Human B-Globin Gene in Hematopiietic Cells from Momozygous B-Thalassemic Mice", Molecular Therapy 3(6): 940-946 (2001)
M	Nakai et al., "Isolation of Recombinant Adeno- Associated Virus Vector-Cellular DNA Juncitons from Mouse Liver", Journal of Virology 73(7): 5438-5447 (1999)
M	Surosky et al., "Adeno-Associated Virus Rep Proteins Target DNA Sequences to a Unique Locus in the Human Genome", Journal of Virology 71(1): 7951-7959 (1997);

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M	Rinaudo et al., "Conditional Site-Specific Integration into Human Chromosome 19 by Using a Ligand-Dependent Chimeric Adeno-Associated Virus/Rep Protein", Journal of Virology 74(1): 281-294 (2000);					
M	Philpott et a., "Efficient Integration of Recombinant Adeno-Associated Virus DNA Vectors Requires a p5-*rep* Sequence in *cis*", Journal of Virology 76(11): 5411-5421 (2002);					
M	Yang et al., "Cellular Recombination Pathways and Viral Terminal Repeat Hairpin Structures Are Sufficient for Adeno-Associated Virus Integration In Vivo and In Vitro", Joural of Virology 71(12: 92310-9247 (1997); and					
M	Summons of the civil action captioned "Avigen, Inc. v. Research Corporation Technology, Inc." ("Avigen v. RCT"), Case No. C02 0880, United STates District Court for the Northern District of California ("Avigen v. RCT")					

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